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**BEFORE THE
SURFACE TRANSPORTATION BOARD**

EX PARTE 705

COMPETITION IN THE RAILROAD INDUSTRY

**INITIAL COMMENTS OF
ARKANSAS ELECTRIC COOPERATIVE CORPORATION**

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Dated: April 12, 2011

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In accordance with the Board's Notice served January 11, 2011 (as modified by the Board's Decision served February 4, 2011), Arkansas Electric Cooperative Corporation (AECC) 1/ submits these comments regarding competition in the railroad industry.

A. INTRODUCTION AND HISTORICAL BACKGROUND

When the Staggers Act was passed more than 30 years ago, it sought through regulatory reform to achieve two principal, and interrelated goals: (1) To maximize the role of competition and demand for services, and minimize the role of regulation, in establishing

1/ AECC is a membership-based generation and transmission cooperative that provides wholesale electric power to electric cooperatives, which in turn serve approximately 490,000 customers located in each of the 75 counties in Arkansas. In order to serve its member distribution cooperatives, AECC has entered into arrangements with other utilities within the state to share generation and transmission facilities. For example, AECC holds ownership interests in the White Bluff plant at Redfield, AR and the Independence plant at Newark, AR, each of which typically burns in excess of 6 million tons of Powder River Basin (PRB) coal annually. In addition, AECC holds an ownership interest in the Flint Creek plant, at Gentry, AR, which normally burns in excess of 2 million tons of PRB coal annually. Because of the large volume of coal used by these plants, the need for long-distance rail transportation to move this coal and the absence of rail competition at two of the plants, AECC has a direct interest in issues related to the financial health of the rail industry, and regulatory proceedings that make use of the railroad cost of capital.

reasonable rates, a sound rail system, and sound economic conditions in transportation; and
(2) To allow rail carriers to earn adequate revenues to make the rail system safe and efficient.
49 USC § 10101.

Over the past three decades, railroads have had remarkable success in achieving that second goal. The financial health of the Class I railroad industry has improved dramatically. The industry now earns sufficient revenues to meet its operating and capital needs, including a reasonable return on investment.

But not so with the first goal. For rail-dependent commodities – and AECC is particularly concerned with transportation of coal – it cannot plausibly be claimed that the role of competition has been maximized as contemplated in the Staggers Act. In part, this situation reflects the wave of major rail mergers that began shortly after the enactment of Staggers, which culminated in the structure of today's railroad industry, with the East and West each dominated by two giant carriers. It also reflects the reluctance of the Board and the ICC to use the statutory tools Congress has provided to preserve and enhance competition among railroads. As a result of limited competition, rail-dependent customers are being required to pay supra-competitive rates and in some circumstances endure unsound economic conditions stemming from inadequate service levels.

Railroads have argued that enhancing intramodal competition would interfere with the realization of adequate revenues, but if it was ever necessary for federal regulatory policy to protect the Class I railroad industry from rigorous intramodal competition to secure adequate revenues, that time has passed. The Class I railroad industry now earns sufficient revenues and can continue to do so while meeting whatever challenges may be posed by

increased competition. Moreover, competition encourages more efficiency and greater innovation in production. Therefore, greater competition in the railroad industry would not only benefit rail customers, it would produce benefits for railroads as well.

B. SUMMARY OF RECOMMENDATIONS

In order to move toward realization of the Staggers Act's goals of minimizing regulation and maximizing reliance on competition and the demand for services, AECC recommends that the Board adopt the following changes in policy:

1. Amend the Board's "competitive access" regulations to encourage use of the "competitive access" options authorized by statute. In general, the regulations should favor increased competition, and the burden of proof should be shifted to the opponents of access to prove that increased competition is not appropriate in a particular case. These regulatory changes, however, will only be effective if the Board demonstrates its commitment to employ these options to remedy inadequate or inefficient service, or otherwise further the public interest, as defined in the statutes;
2. Rescind the Bottleneck Rule, at least with respect to trainload and unit train movements, and require that carriers, on request, quote separately challengeable rates; and
3. Disengage the Board's current process for determining "revenue adequacy" and replace it with an acknowledgement that (a) the industry as a whole has achieved the objective articulated in the statute; and, (b) variations in performance among individual firms can be ascribed to such factors as management effectiveness, and absent a showing of highly extraordinary circumstances do not justify increased differential pricing;

C. DISCUSSION

1. Economic Analysis

AECC's evaluation of the current state of railroad competition and recommendations for enhanced competition are supported by the analysis described in the attached Verified Statement of Michael A. Nelson. Mr. Nelson is an independent transportation

systems analyst with over 31 years of experience advising clients on rail transportation. He has frequently presented expert testimony in proceedings before the Board and its predecessor.

Mr. Nelson considers several recent studies of the railroad industry, including the Christensen Study prepared for this Board and a joint study of railroad industry issues conducted by the United States Departments of Agriculture and Transportation. He finds that the Class I railroad industry is financially healthy and earns sufficient revenues to meet all reasonable economic and statutory objectives.

At least in the last several years, however, the industry has moved into the realm of supracompetitive earnings as a result of inadequate intramodal competition.

Mr. Nelson then evaluates available methods to enhance competitive access that would promote intramodal competition and thereby curb the excessive exercise of market power by railroads: Through routes, terminal facilities access, and reciprocal switching. He finds that the Board's past practices regarding these options are unduly restrictive in light of current market conditions. Under current conditions, the Board should adopt policies to make greater and more effective use of these options to promote improved and more efficient rail service.

Next, Mr. Nelson evaluates the effects of the Board's current policies regarding bottlenecks. He concludes that these policies produce several substantial, identifiable harms to economic efficiency and the public interest.

In order to achieve the intended purposes of competitive access, Mr. Nelson discusses principles for properly pricing such access. Inefficiency and other market distortions could result from pricing access too cheaply or too dearly, and Mr. Nelson discusses such issues.

Finally, Mr. Nelson evaluates the effects that increased competition can be expected to have on efficiency, service quality, and productivity. He concludes that railroads, their customers, and the economy as a whole will benefit from increasing competition for railroad services. In particular, he shows that railroads' claims that increased competition will inhibit needed capital investment are wrong; in fact, competition is more likely to encourage investment than to inhibit it.

2. Legal Issues

a. *Competitive Access*

The competitive access measures that AECC recommends that the Board adopt all fall squarely within the powers the Board is authorized by Congress to exercise. Nothing we are recommending in these Comments that would require new legislation. On the contrary, in taking these actions the Board would be carrying out the evident intent of Congress.

Through Routes. Section 10705 (a) grants to the Board general authority to prescribe through routes, including through routes that short-haul a participating carrier. Subsection (a) (1) says that the Board "may" prescribe a through route, and "shall" do so "when it considers it in the public interest". It would be hard to imagine a clearer grant of discretionary authority. With specific reference to through routes that would require a participating carrier "to include in a through route substantially less than the entire length of its railroad", Subsection (a) (2) provides that the Board may require a railroad to participate in such a through route only where either doing so is required under other provisions of the statute, or inclusion of the entire line would make the route unreasonably long, or the Board finds that the proposed through route is "needed to provide adequate, and more efficient or

economic transportation.” Thus, the Board has broad discretion to prescribe a through route, even in a “short-haul” situation, to improve rail transportation.

Access to Terminal Facilities. Section 11102 (a) grants to the Board authority to require that one railroad allow another railroad to use its “terminal facilities, including main-line tracks for a reasonable distance outside of a terminal”, if the Board finds that such use would be “practicable and in the public interest without substantially impairing the ability of [the owning carrier] to handle its own business”. Again, this provision grants broad discretion to the Board to order terminal access to promote the public interest.

Reciprocal Switching. Section 11102 (c) grants to the Board authority to require railroads to provide each other with reciprocal switching access to each other’s customers, where the Board finds that it is “practical and in the public interest”, or where “necessary to provide competitive rail service”. This is another broad grant of authority to the Board, which can order reciprocal switching to serve the public interest or to provide competitive rail service.

However, although Congress has given the Board very broad powers and wide discretion to use these tools to promote the public interest, improve rail service, enhance competition, etc., the Board chose to adopt competitive access rules that limit its exercise of this broad discretion to situations where it determines that it is “necessary to remedy or prevent an act that is contrary to the competition policies of 49 U.S.C. 10101 or is otherwise anticompetitive.” 49 CFR § 1144.2 (a).

Although the focus of the competitive access rules on competitive issues is narrower than the statutory “public interest” standard, it is (or ought to be) broad enough to address the market power problems that now characterize the Class I railroad industry. The

“competition policies” of Section 10101 that the competitive access rules are intended to foster include: “allow[ing], to the maximum extent possible, competition and the demand for services to establish reasonable rates for transportation by rail”, “minimize[ing] the need for Federal regulatory control over the rail transportation system”, fostering “effective competition among rail carriers”, and “avoid[ing] undue concentration of market power”. 49 USC § 10101.

Yet, as Mr. Nelson’s statement shows, recent rate increases reflect the increased exercise of market power by the Class I railroads, but the Board has not used its competitive access tools to promote intramodal competition. On the contrary, the Board has used great creativity in finding reasons not to exercise the authority it unquestionably has to promote the competitive policies of the statute. The recent case of Entergy Arkansas, Inc. and Entergy Services, Inc. v. Union Pacific RR, STB Docket No. 42104, Decision served Mar. 15, 2011, illustrates this. 2 /

Docket No. 42104 involved an application asking the Board to prescribe a through route to provide competitive access to a power plant in Arkansas. The Board ruled that, under its competitive access rules, to obtain the through route the applicants needed to show either that the incumbents were providing inadequate service or that they were foreclosing more efficient service over another carrier. The Board found that the new route was more efficient than the existing route, and that the incumbent carriers had repeatedly provided inadequate service, but it denied the application for a through route.

2/ AECC is a party to that case and has filed a petition for reconsideration. We will not discuss here the issues raised in that petition.

With respect to efficiency, the Board ruled that the proposed through route was not enough better than the existing route, and that capital investments would be required to establish the new route. With respect to inadequate service, the Board said that there was no showing that the poor service provided by Union Pacific, the Incumbent carrier, was caused by its market power, and that BNSF Railway, the carrier that would compete with UP via the through route, had service problems, too.

Assuming, as we must, that this ruling represents a correct application of the Board's competitive access rules, what it shows is that those rules will not allow competitive access except in extraordinary circumstances. The applicants for the through route were denied the opportunity to obtain a route that they thought would be better for them, because the Board decided it wasn't enough better. The applicants were denied an opportunity to obtain an alternative to the inadequate service they were getting from UP, because the Board thought BNSF also had service problems. This misses the whole point of competition: Competition gives customers an alternative, which provides incentives for better performance. If competition were established between UP and BNSF, both carriers would have an incentive to perform better.

Therefore, the Board's current competitive access rules are inadequate to accomplish the enhancement of intramodal competition that Mr. Nelson's analysis shows needs to occur.

In light of current circumstances, AECC suggests that an effective way to improve the Board's competitive access rules to enhance intramodal competition would be to establish a rebuttable presumption in favor of competitive access where applicable statutory criteria are

satisfied. The shipper (or competing carrier) seeking access through a proposed through route, switching arrangement, or terminal access, would be required to show that it did not presently have competitive rail service, and describe how it proposed that competitive service be provided; the applicant would not have to prove that the incumbent carrier was guilty of competitive abuse, inadequate service, inefficiency, or whatever.

The burden would be on the incumbent carrier to show reasons why access should be denied. In cases involving reciprocal switching or terminal access, this might, for example, include a showing that the proposed access would interfere unduly with the incumbent's own operations. The Board would weigh the evidence and evaluate it under 49 USC § 10101 and other applicable statutory standards.

b. Bottleneck Rates

In the highly concentrated Class I railroad industry, it is often the case that a rail-dependent customer can be served by only one carrier that faces no competition for a ("bottleneck") portion of a movement. Even though one or more other railroads may be in a position to compete for the non-bottleneck portion of the movement, such competition is stifled by the Board's Bottleneck Rule.

As discussed in more detail in Mr. Nelson's verified statement, the Board's policy of insulating bottleneck movements from competitive pressure has substantial adverse impacts on rail operating efficiency, system reliability, and infrastructure investment. A study by Mr. Nelson demonstrating these negative effects was cited favorably in the joint study prepared by the Departments of Agriculture and Transportation.

The time has come for the Board to liberalize its treatment of such bottlenecks.

The Board is not precluded by the Supreme Court's decision in Great Northern Rwy v. Sullivan, 294 U.S. 458 (1935) from changing its current policy protecting the market power of bottleneck railroads. Great Northern was decided under a totally different regulatory regime than now exists as a result of the Staggers Act. The purposes of the Staggers Act would be promoted by allowing competition to act where it can, and ensuring that regulatory protections (including those related to rate reasonableness) apply to the non-competitive portion of the movement.

In Great Northern, a rail customer received lignite via a through route involving Canadian Pacific and Great Northern, and paid one rate for the entire movement. The customer claimed that Great Northern's share of the rate was excessive and sued for reparations. The Supreme Court rejected the claim, because what the customer paid, the total charge for the through movement, was reasonable, and "the division [of the total rate] among connecting carriers . . . is no concern of the shipper. * * * [R]etention by [Great Northern] of an undue proportion of just and reasonable charges did not damage plaintiff." 294 U.S. at 475.

That rationale does not apply to a bottleneck under the Staggers Act. Under the Staggers Act, competition is supposed to keep rates reasonable to the maximum extent possible, and regulation is supposed to step in only when competition is unavailable. In a bottleneck situation, rate regulation is unnecessary for the competitive part of the movement, but there is no competition for the bottleneck portion. However, the Board's approach uses the existence of a bottleneck on one part of the movement to shield the bottleneck carrier from competition on the entire movement. The Board itself has recognized – in the context of merger applications – that shippers are subject to tangible harm when regulation of an entire

movement is substituted for competition involving non-bottleneck segments. Indeed, the Board has imposed merger conditions requiring the preservation of competition involving non-bottleneck segments. The reasoning in Great Northern no longer applies, because shippers do experience damages if they are forced to accept regulation of an entire movement in lieu of the partial competition provided by non-bottleneck segments.

In the future, the Board should not apply the bottleneck rule to restrict rail customers' ability to obtain competitive service where it is available and to obtain regulatory protections where it is not.

E. CONCLUSION

The Class I railroad industry today does not need to be "protected" from competition. On the contrary, railroads would benefit from enhanced competition, just as their customers would. The time has come for the Board to modify its restrictive past policies and enhance opportunities for intramodal competition.

Respectfully submitted,



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Dated: April 12, 2011

VERIFIED STATEMENT

OF

MICHAEL A. NELSON

My name is Michael A. Nelson. I am an independent transportation systems analyst with over 31 years of experience in railroad competition and coal transportation. My office is in Dalton, Massachusetts.

I have directed or participated in numerous consulting assignments and research projects in the general field of transportation. My work typically involves developing and applying methodologies based on operations research, microeconomics, statistics and/or econometrics to solve specialized analytical problems.

Of particular relevance to this testimony, I submitted extensive testimony to this Board in the recent competitive access/through route case of first impression (Docket No. 42104), covering issues ranging from the service and efficiency conditions underlying the requested relief to detailed operational considerations that would be associated with its implementation. I was the author of the study of Bottleneck Rule impacts cited in the joint study of rail issues conducted by the Departments of Agriculture and Transportation, and I submitted testimony to this Board in Ex Parte No. 680 regarding the Christensen study and in Ex Parte No. 658 regarding experiences of the first 25 years under the Staggers Act. I was co-author of several sets of comments submitted to the Board regarding its revisions of the cost-of-capital methodology and related revenue adequacy determinations.

I analyzed competitive and traffic issues for Class I railroads involved in several of the mergers and acquisitions that formed the current rail network. I have also performed extensive analyses related to potential new accesses by rail carriers (ranging from buildouts for individual plants to major line construction projects). For approximately 11 years I have assisted coal users in the identification and assessment of options to improve price/service options for coal transportation and in forecasting potential future conditions and developments.

I received my bachelor's degree from the Massachusetts Institute of Technology in 1977. In 1978, I received two master's degrees from MIT, one in Civil Engineering (Transportation Systems) and one from the Alfred P. Sloan School of Management, with concentrations in economics, operations research, transportation systems analysis and public sector management. Prior to February 1984, I was a Senior Research Associate at Charles River Associates, an economic consulting firm in Boston, Massachusetts. My qualifications and experience are described further in Exhibit A.

On behalf of Arkansas Electric Cooperative Corporation (AECC), I have been asked to provide economic and other analyses and facts in support of the Board's effort in this proceeding to "explore the current state of competition in the railroad industry and possible policy alternatives to facilitate more competition, where appropriate."

INTRODUCTION AND SUMMARY

The Board has at its disposal a number of tools to curb the railroad exercise of market power through the promotion of intramodal competition. These include the "competitive access" options (through routes, terminal trackage rights and reciprocal switching) and bottleneck rate policies, which the Board has singled out for consideration in this proceeding.

The Board also holds authorities that may govern the existence and vigor of intramodal competition through means that have not been singled out for inclusion in this proceeding. These include, for example, its authorities pertaining to the reasonableness of interchange commitments/paper barriers, which the Board expressly excluded from the scope of this proceeding. These also include its authority over interchange facilities and trackage rights compensation, and its broad authority to reopen past proceedings, including mergers, to rectify competitive problems identified through new evidence, or stemming from substantial changes of circumstance or material errors that may have occurred.

To avoid unduly broadening the issues in this proceeding, this statement focuses primarily on the competitive tools for which the Board has specifically solicited comment in its notice of this proceeding.¹ It follows the outline of issues presented on pages 6-7 of the Board's notice, and includes the following:

The Financial State of the Railroad Industry – This statement begins by reviewing available information regarding the financial health of the rail industry, and its evolution under the Staggers Act. In accordance with the Board's request in its notice, this review addresses the findings and conclusions of the Christensen Study and the joint study of railroad industry issues conducted by the United States Departments of Agriculture and Transportation. My analysis concludes that the financial state of the rail industry not only supports, but basically requires, loosening of the Board's restrictive practices regarding intramodal competition. This conclusion is reaffirmed by evidence and other information regarding unapproved losses of competition that have resulted from past transactions.

¹ The other tools would provide additional opportunities under current statutes for the Board to promote reliance on market forces, and should not be overlooked.

Competitive Access Options – This statement then discusses the competitive access options of alternative through routes, terminal facilities access, and reciprocal switching in light of current market conditions. It concludes that past Board practices regarding these options have been overly restrictive, and have kept these options from fulfilling their potential in supporting the provision of adequate and efficient service.

Bottleneck Rule – This statement reviews an analysis of the public interest impacts of the Bottleneck Rule that I performed previously, and that is cited as an authoritative source in the joint study prepared by the Departments of Agriculture and Transportation. That analysis showed the substantial adverse impacts of the rule on rail operating efficiency, system reliability, and infrastructure investment.

Access Pricing – This statement then discusses issues related to access pricing, including issues related to a carrier's "current financial standing and future prospects" in the determination of access pricing.

Impacts – This statement reviews various impacts that can be expected from increased reliance on market forces, including incentives for efficient production, reductions in problems with service quality, and reductions in the deadweight economic losses associated with the exercise of market power. These benefits flow through the economy in many forms, including reduced resource costs for carriers and shippers alike.

This portion of the statement also includes a discussion of the effects of pro-competitive reforms on rail investment. Railroads and others have argued that competition somehow hinders investment, but this concern is unfounded, and is refuted by any number of highly visible

examples. If anything, competition promotes investments, particularly those that improve productivity and reduce resource costs.

The carriers' argument that the Board should protect their revenue streams through perpetual restraint of market forces ultimately seeks to have the Board protect the competitors, and not the process of competition. This would be contrary to the public interest and the national transportation policy.

DISCUSSION

1. The Financial State of the Railroad Industry

A. Overview

Under Section 10704(a)(2), the Board has an ongoing, statutory responsibility to monitor the financial condition of Class I railroads:

"The Board shall maintain and revise as necessary standards and procedures for establishing revenue levels for rail carriers providing transportation subject to its jurisdiction under this part that are adequate, under honest, economical, and efficient management, to cover total operating expenses, including depreciation and obsolescence, plus a reasonable and economic profit or return (or both) on capital employed in the business. The Board shall make an adequate and continuing effort to assist those carriers in attaining revenue levels prescribed under this paragraph. Revenue levels established under this paragraph should--

(A) provide a flow of net income plus depreciation adequate to support prudent capital outlays, assure the repayment of a reasonable level of debt, permit the raising of needed equity capital, and cover the effects of inflation; and

(B) attract and retain capital in amounts adequate to provide a sound transportation system in the United States."

Under Section 10704(a)(3), the Board annually determines which rail carriers are earning "adequate revenues" under the standards and procedures adopted by the Board pursuant to the requirements of Section 10704(a)(2). Those standards and procedures have been altered

twice in recent years, but while individual railroads periodically have been found to be revenue-adequate in specific years, at no time has the industry as a whole ever been found by the Board or ICC to be revenue adequate.

Although the annual finding of revenue inadequacy under the ICC/STB methodology has taken on the character of the sun rising in the east, numerous other information sources contradict this finding. In an industry characterized by economies of density, traffic densities have increased dramatically, as has productivity. Notwithstanding the presence of competition that drove rates down in real (and sometimes nominal) terms over a period of decades, the railroads have been able to make very large infrastructure investments. As stated by AAR, “(F)rom 1980 to 2009, America's freight railroads invested more than \$460 billion...to maintain and improve their infrastructure and equipment.”²

At the same time, the railroads have delivered a dramatic run-up of market capitalization for the benefit of their shareholders. This run-up has been punctuated by several large transactions that entailed substantial acquisition premiums, capped by the recent acquisition of BNSF Railway by Berkshire Hathaway. In November 2009, Warren Buffett - a man widely regarded as one of the most successful investors in the world - was willing to pay \$34 billion for a railroad that had a market capitalization of less than \$13 billion at the end of 1999.³ During the same time that BNSF's value had more than doubled, the Dow Jones Industrial Average declined by about 12 percent. Given that - for less than 80 percent of BNSF's stock - Mr. Buffett's offer included *an acquisition premium that is approximately equal to the annual gross domestic*

² See <http://aar.org/KeyIssues/Infrastructure-Investment.aspx>.

³ See <http://community.seattletimes.nwsource.com/archive/?date=19991220&slug=A1999122010041>.

product of Nicaragua, and larger than that of 51 other countries, the proposition that railroad revenues are inadequate (as defined in the statute) has moved from the realm of the debatable to the realm of the absurd.

To get perspective on this course of events, it is useful to review the origins of the concern with the revenue adequacy issue. At the time of the Staggers Act, the financial condition of much of the industry was, at best, very tenuous. The northeast rail system had collapsed in a series of bankruptcies in the early 1970's, resulting in the creation of Conrail as a federally-sponsored and subsidized railroad, which began service in 1976. At the time of the Staggers Act, the federal government still owned Conrail, and was still making capital infusions to offset extensive deferred maintenance of Conrail's infrastructure, power and rolling stock. Outside of the northeast, other major railroads had also entered bankruptcy, and the prospect of broader federal involvement in owning – and financing the capital needs of – the railroads was quite real.

In this context, the revenue adequacy standards established in Section 10704(a)(2), read literally, are quite modest (“revenue levels . . . that are adequate, under honest, economical, and efficient management, to cover total operating expenses, including depreciation and obsolescence, plus a reasonable and economic profit or return (or both) on capital employed in the business”). As long as a railroad can pay its bills and attract the capital it needs to remain a viable going concern without public subsidy, the requirements of the statute would be met.

It did not take long under the Staggers Act for even Conrail to begin to stand on its own, without requiring federal subsidies. In 1987, Conrail was sold in the private sector as a viable competitor in a transaction that netted over \$1.6 billion from investors. A decade later, Conrail's assets were divided between NS and CSX in a transaction valued at approximately \$20 billion.

Conrail and other railroads strengthened their financial condition and going concern value during this time by taking advantage of the freedoms provided by the Staggers Act. A large proportion of the trackage that was owned and operated by Class I railroads in 1980 was abandoned or spun off to low-cost operators. Numerous mergers occurred, and productivity improvements – many implemented through confidential contracts – held costs down. Indeed, the Christensen Study found that railroads were able to fully satisfy their capital needs by the mid-1990's.⁴

If he were alive today, Rep. Staggers would have the satisfaction of seeing that the reforms implemented under his name in 1980 had such profound and beneficial effects on the industry's financial condition. However, with the freedoms provided by the Act, and after all the mergers, abandonments, shortline spin-offs and workforce reductions of the last 30 years, he would be left to wonder why the Board continues to find every year that the industry has not achieved revenue adequacy.

The answer can be found from a combination of various sources, including the Christensen Study, the study by the Departments of Agriculture and Transportation, and comments AECC submitted to the Board in Ex Parte No. 664 (Sub-No.1), Use of a Multi-Stage Discounted Cash Flow Model in Determining the Railroad Industry's Cost of Capital. These sources indicate that:

⁴ As described in the Christensen Study at p3-16, the employment of capital by railroads can be evaluated using a "Q Ratio", which compares the imputed price of capital to the marginal impact of capital on variable cost. A Q Ratio equal to one implies cost-minimizing employment of capital, while values greater than one imply underemployment of capital and values less than one imply overemployment of capital. As shown in Table 3-13 on p3-18 of the Christensen Study, in 1987 only ATSF and SP employed at least the cost-minimizing amount of capital, while by 1995-1996 all 6 of the railroads included in the analysis did so.

1. Since at least 2006 the industry has achieved revenues that satisfy objective economic and applicable statutory criteria.
2. Rail rate increases since at least 2006 reflect an increased exercise of market power that is inconsistent with the public interest.
3. The Board's revenue adequacy findings may not reflect the industry revenue achievement cited in Item # 1, because of the way that the exercise of market-power cited in Item # 2 affects the results generated by the Board's cost of capital methodology.
4. Past industry developments, including the mega-mergers and the Bottleneck Rule, appear to have contributed to increased costs that are harmful to shippers and carriers alike, and inhibited faster achievement of revenue sufficiency.

Individually and collectively, these points substantiate the propriety and importance of Board action to loosen the restraining grip it and the ICC before it have held on potential actions to enhance and expand intramodal competition. This conclusion is reaffirmed by evidence and other information regarding unapproved losses of competition that have resulted from past transactions.

Each of these points is discussed further below.

B. Rate Increases at Least Since 2006 Are Excessive and Reflect an Increased Exercise of Market Power

Notwithstanding the Board's revenue adequacy methodology, the Christensen Study concedes outright that the rail industry beginning no later than 2006 has achieved revenues that satisfy the economic criteria for revenue sufficiency that Christensen itself identified (based on comparisons of revenue per ton-mile [RPTM] vs. average total costs [ATC]). The report specifically notes that the industry in 2006 was "101 percent revenue sufficient."⁵

⁵ Christensen Study, Executive Summary at ii.

While the report also claims that “(S)ince 2006, the railroad industry has remained approximately revenue sufficient”, several considerations lead to the conclusion that the exercise of market power by railroads subsequent to 2006 has been greater than the text of the report concedes.

First, the report acknowledges that it not only updated the previous study to incorporate new data, but also changed materially the methodology it uses to assess the relationship between RPTM and ATC. It acknowledges that the change systematically reduces the extent to which measured RPTM exceeds ATC, but does not discuss adequately the rationale for the change, or the results that would have been shown by the methodology Christensen originally utilized.⁶

Second, the report relies extensively on the “Lerner Index” to assert that the exercise of rail market power has not increased. However, the U.S. Federal Trade Commission (FTC) rejects use of the Lerner Index, in large part because “...exogenous economic factors, such as shifts in ...the cost of inputs, could result in dramatic and misleading changes.”⁷ Christensen attempts to use the Lerner Index in precisely the circumstances – shifts in the cost of inputs – where the FTC warns it could give “dramatic and misleading” results. Christensen’s statements to the effect that market power was going down as prices were going up confirm the fallibility of this measure due to the issue highlighted by the FTC, but say nothing about the actual exercise of market power.

Third, the report presents specific information that undermines the stated conclusion that rates tracked costs closely after 2006. For example, Figure 6-2 of the Christensen study shows dramatic increases in inflation-adjusted RPTM subsequent to 2006 for all commodities except

⁶ Christensen Study at pp 4-4 to 4-5.

⁷ See <http://www.ftc.gov/opp/jointvent/classic3.shtm>.

intermodal. Using coal as an example, Table 5-2 on p 5-10 showed a constant dollar RPTM for coal of 1.3 cents per revenue ton-mile as of 2006. At the same time, Table 5-6 on p 5-17 showed that constant dollar marginal costs increased by 0.1 cents per revenue ton-mile from 2006 to 2007-2008. On a cost basis, therefore, a rate increase for coal of approximately $(0.1/1.3=)$ 7.7 percent could occur between 2006 and 2007-2008 without altering the deviation of price from marginal cost, which Christensen explicitly has accepted as the definition of market power.⁸ However, the real RPTM increase for coal between 2006 and 2008 shown in Figure 6-2 was approximately 20 percent. By Christensen's own definition and using Christensen's own data, the railroads increased materially their exercise of market power over coal, and apparently much other carload traffic, after achieving revenue sufficiency in 2006. Even if Christensen is correct that overall revenues tracked costs closely after 2006, it would mean either that the railroads have been moving increasing quantities of intermodal traffic at rates that do not cover costs, or that the methods used by Christensen overstate ATC relative to its true value. Neither of these scenarios provides a valid justification for the acceleration of differential pricing on commodities other than intermodal after 2006, when revenue sufficiency was achieved.

The Christensen report's failure to deal adequately with the unique characteristics of intermodal traffic also appears to have undermined the validity of some of its other stated findings. For example, Christensen has tried to excuse observed rate increases on the basis that productivity improvement has slowed.⁹ However, reading the fine print indicates that the reported results depend upon acceptance of the mind-bending propositions that (a) productivity

⁸ See November 2009 Christensen report at p ES-6.

⁹ See November 2009 Christensen report at p ES-5: "The increase in railroad rates experienced in recent years is the result of declining productivity growth and increased costs rather than the increased exercise of market power."

change has literally been negative,¹⁰ in part because (b) the railroads have responded to fuel price increases by moving to more fuel-intensive technologies.¹¹ Perhaps if Christensen had devoted greater attention to such absurd gaffes in its findings, and less to repeating hollow assertions that the railroads aren't accelerating the exercise of market power, they would have identified the obvious likelihood that increases in the proportion of traffic formed by high-cost, fuel-intensive intermodal haven't properly been accounted for in some of their models. Again, this oversight does not excuse the documented acceleration of inflation-adjusted rates for other commodities.

Overall, notwithstanding the Christensen Study's mantra to the contrary, the information contained in the study confirms that rail rate increases on carload traffic observed since 2006 have exceeded the level that would be justified by factor price and productivity considerations, at least if requirements for "honest and efficient management" are enforced and cross-subsidies are prevented. In part these rate increases reflect an increase in the exercise of rail market power that has produced contribution above the level needed for revenue sufficiency (i.e., "supracompetitive earnings").

Neither economic theory nor applicable statutes provide any foundation for the Board to acquiesce in supracompetitive rail earnings. While the ICC and STB have operated under a specific mandate to support improvement in the financial condition of the industry relative to its condition in 1980, that mandate does not extend beyond the point where revenue sufficiency is achieved, as it was by 2006.

¹⁰ Christensen Study at Table 3-7 on p3-12.

¹¹ Christensen Study at p3-15.

C. Market Power Masks Revenue Adequacy Under the Board's Methodology

In Ex Parte No. 664 (Sub-No.1), Use of a Multi-Stage Discounted Cash Flow Model in Determining the Railroad Industry's Cost of Capital, AECC submitted comments describing how both the DCF and CAPM methods employed by the Board in the determination of the cost of capital provide false indications of insufficient earnings when applied to data that reflect an increasing exercise of market power.¹² Those comments, which I incorporate here by reference, discussed how (a) CAPM is susceptible to artificially inflating the estimated cost of capital by misconstruing as increased risk any higher carrier returns that in fact result from the increased exercise of market power; and, (b) the “expectations” portions of DCF models are subject to the same problem, as increases in the exercise of market power by railroads lead analysts to increase their expectations of future returns, artificially inflating the cost of capital estimated by the DCF methodology. Basically, both of the models upon which the Board relies to determine the cost of capital translate the increased exercise of rail market power to artificial increases in the estimated cost of capital. The averaging of the results from the two models thus provides an appearance of reliability and stability, but in effect provides cover for the industry to retain contribution to which it is not entitled under any relevant regulatory or economic principle.

D. Mega-Mergers and Bottleneck Rule Increased Costs and Suppressed Earnings

The Christensen Study shows that a portion of the need for differential pricing prior to 2006 resulted from adverse impacts on the cost characteristics of the rail industry that arose during the final round of major mergers and the imposition of the “Bottleneck Rule”. Figures 3-2 through 3-5 on pages 3-21 and 3-22 of the Christensen Study display year-to-year variations in the marginal cost of a revenue ton-mile for each of the 4 largest U.S. rail systems and provide a

¹² See “Comments of Arkansas Electric Cooperative Corporation” (April 14, 2008) and (September 15, 2008).

succinct and transparent summary of the mega-merger impacts that is basically the same for all 4 systems. For each, a lengthy period of declining marginal costs is dramatically ended not by an exogenous change in economic conditions, factor prices, etc., but rather **by the occurrence of the system's last major merger**. Marginal costs immediately jump to a higher level, and enter a period of lesser decline or stagnation. Only one of the systems (CSX) for one year (2004) ever achieves a post-merger marginal cost equivalent to the level that already had been achieved before the merger.

At least a portion of these marginal cost impacts appear to be driven by the opportunities created by the mega-mergers for carriers to increase their length of haul, and the ability of the merged carriers under the Bottleneck Rule to shield those longer hauls from competition. These issues are discussed further below.

In Figure ES-8 on page ES-19 of its November 2009 report, Christensen previously demonstrated how, in addition to any marginal cost impacts, the mega-mergers also increased average fixed costs. Since fixed costs drive the need for differential pricing, it can be seen that the mega-mergers drove upward both the marginal cost and the amount of differential pricing above marginal cost needed to attain revenue sufficiency. Particularly in light of the finding in the November 2009 Christensen report (at pES-21) that the railroads were very close to achieving revenue sufficiency immediately before the mega-mergers were initiated, it is reasonable to conclude that revenue sufficiency was within the industry's grasp in the mid-1990's, and that the self-inflicted increases in variable and fixed costs stemming from the mega-mergers materially delayed its achievement.

E. Competition Needed to Counteract Unapproved Losses from Mergers

In STB Ex Parte No. 658, The 25th Anniversary of the Staggers Rail Act of 1980: A Review and Look Ahead, I submitted written testimony on behalf of AECC that identified and described several ways in which unapproved losses of competition occurred or may have resulted from the wave of rail mergers that occurred under the Staggers Act:

The current rail environment results in large part from the handling by the Board and its predecessor of numerous mergers and acquisitions that have been proposed since the Staggers Act. These transactions in many cases have eliminated redundancy, reduced costs, extended single-line services and produced other benefits. However...there are aspects of the ICC/STB's handling of merger applications under the Staggers Act that may have hindered the full realization of the benefits of market forces.

Each application for a merger or acquisition normally has triggered a detailed consideration of competitive issues. When competitive problems have been identified, remedial conditions have frequently been imposed. Few if any merger approvals have been granted in which substantial unremediated competitive problems were believed (by the ICC/STB) to exist. Moreover, several of the more recent mergers have been followed by formal oversight proceedings (typically 5 years) during which competitive problems that materialized could be brought forward.

Despite these procedural safeguards, there are several avenues through which meaningful competition may have inadvertently been lost in the merger process.

The identification and discussion of the 4 different categories of lost competition appearing on pages 5-9 of that testimony is incorporated here by reference.

I note that for one of the forms of lost competition – i.e., that stemming from “3-to-2” reductions in the number of serving carriers - the Christensen Study has resolved an issue that has been a source of controversy for approximately 15 years. Specifically, the Christensen Study demonstrates that the Board's practice in some mergers of only preventing 2-to-1 reductions in the number of serving carriers did not adequately protect against competitive harm, and that the

“3-to-2” reductions in the number of serving carriers that resulted from some past mergers had unapproved but tangible anti-competitive effects on shipper price-service options.¹³

F. Summary

The data show that past events, most notably the mega-mergers that formed the current rail duopolies, have contributed to reduced competitive pressures and adverse changes in cost structure that have inhibited, rather than supported, the railroads’ achievement of revenue sufficiency. Prior to those events, the data indicate that the industry had essentially achieved revenue sufficiency on the strength of cost reductions and productivity improvement, and was fully able to employ capital to its cost-minimizing level. These considerations support the proposition that competition is beneficial to the financial health of the industry, and the propriety of the review of competitive access and bottleneck issues now being undertaken by the Board. Above and beyond the general support provided for competition in many elements of the national transportation policy, Board action to add intramodal competition would mitigate the problems associated with supra-competitive earnings, inefficient operations and lost competition that have been demonstrated.

2. Competitive Access Options

A. The Board’s Failure To Apply The Statutory And Regulatory Standards

Congress has provided the Board with multiple competitive access tools, guidance to multiple situations that warrant their application, and broad latitude regarding their wider use. Use of those tools would be fully consistent with the national transportation policy, and is appropriate – indeed, overdue – in light of the considerations described above. In a competitive

¹³ See Christensen Study at p6-10 and Table 6-3 at p6-11. Using coal shipments as an example, the strong response of RPTM to the presence of railroad competition in the destination county (coefficient on RRCOMP_TER) and the lesser impact of the DLM_TER variable indicates that the important determining factor is the number of carriers, not whether or not a monopoly is present.

market, supracompetitive earnings, inefficient operations, and anti-competitive pricing tend to draw entry by new competitors. Action by the Board to loosen the reins on competitive access would replicate that competitive market response.

In addition to the aforementioned considerations, which relate to industry revenues and the sufficiency thereof, it is also important to take into account issues pertaining to the adequacy of service provided by the railroads. The statutes contemplate that competitive access options may be activated by service problems, as well as efficiency considerations. Indeed, unlike the situation with rates, where a formal process exists to address the reasonableness of individual rates, there is no formal process to address “service reasonableness” or “efficiency reasonableness”. Competitive access options may well provide “the first line of defense” when problems arise regarding such issues.

Service and efficiency issues are especially important because of their direct impact on resource allocation. Inadequate rail service and inefficient routing practices can rapidly accrue costly deviations from the efficient allocation of economic resources. For example, in Docket No. 42104, Entergy Arkansas, Inc. and Entergy Services, Inc. v. Union Pacific Railroad Company and Missouri & Northern Arkansas Railroad Company, Inc., there was no dispute over the magnitude of AECC’s estimates that showed substantial harm as a result of rail service problems. Likewise, the Board’s own analysis in that proceeding showed that use of a circuitous route to move coal to a single powerplant cost over \$11 million/year in incremental variable costs. Where inadequate service, inefficient routings, or other public interest problems arise due to the absence of competition, the competitive access options enable the Board to introduce remedial competition.

Historically, the largest problem with the competitive access options has been the Board's refusal to deploy them. In its recent decision denying the relief requested in Docket No. 42104, for example, the Board relied on a self-imposed requirement under which it apparently will only grant relief when a carrier has engaged in an unspecified degree of "competitive abuse". Such a requirement does not appear in the statutes or its own regulations, and its superimposition by the Board basically forecloses the relief for public interest problems that the competitive access options explicitly are intended to provide.

In competitive access cases, this treatment by the Board implicitly denies facts regarding the public interest that the Board acknowledges elsewhere to be true. In particular, a central element of the economic definition of the public interest involves the minimization of resource costs. The Board acknowledges and acts on this principle in merger cases, where cost reductions are counted as public benefits whether they accrue to carriers or shippers. When resource costs are at issue, the Board has an obligation under common sense as much as under Section 10101(5) to minimize resource costs and avoid waste.

However, in competitive access cases, the Board appears to give greater weight to the transfer payment made to carriers under differential pricing than to the actual waste of resources being generated by the carrier's conduct (inefficient routing, inadequate service, etc.). This is especially perverse in that the differential pricing itself is permitted only because it minimizes distortions in the efficient allocation of resources. The statute says carriers should answer for inefficient routing, inadequate service, and the like by facing competition, but the Board has just kept putting the burden on the shipper, and removing accountability from the carrier. Unless and until the Board is prepared to evaluate competitive access options under a valid and impartial public interest standard, those options will not fulfill their legitimate purposes.

The following discussion of individual competitive access options assumes that such a change occurs.

B. 49 U.S.C. § 10705 (Through Routes)

Under the plain language of the statute, § 10705(a)(1) provides very broad general authority for the prescription of through routes,¹⁴ while § 10705(a)(2) defines the circumstances under which the Board can implement a through route that shorthauls a carrier. The plain language of the statute contemplates that the Board will shorthaul carriers to remedy unreasonable discrimination, to establish interchange, or to implement reciprocal switching or terminal trackage rights. The Board also can impose a shorthaul when the carrier's route is unreasonably circuitous or when "the Board decides that the proposed through route is needed to provide adequate, and more efficient or economic, transportation." Basically, the statute empowers the Board to shorthaul carriers in a variety of circumstances deemed by Congress to be in the public interest.

All else equal, it undoubtedly is true that carriers don't like to be shorthauled. However, the Board's apparent reticence to use this option is inconsistent with the way, in the post-Staggers Act period, carriers voluntarily cooperated on shorthaul routes to ensure the efficiency and competitiveness of their service offerings. An example of this with which I personally am familiar is SP in the mid-1980's, which short-hauled itself over the "Central Corridor" (via DRGW) to provide an efficient and direct route for various substantial commodity flows moving between points on the West Coast (generally north of Fresno, CA) and points east and generally north of Herington, KS. The railroads themselves relied on shorthauls when needed to produce

¹⁴ Through routes are most directly applicable to trainload and unit train movements. Their applicability to smaller rail shipments may need to be evaluated on an individual basis.

competitive service via efficient routes; there is no apparent reason for the Board to do otherwise.

Especially in light of the industry's sound financial condition, the Board should not hesitate to wield this authority for the multiple purposes provided in the statute to impart market discipline to the conduct of the carriers. The Board has spoken softly, but to date it has left the big stick in the shed. Given the many issues that effectively could be addressed with through route prescriptions, it would be contrary to the public interest and the evident Congressional intent for the Board to continue to withhold use of this option.

C. 49 U.S.C. § 11102(a) (Terminal Facilities Access)

As with through routes, Congress provided the Board with broad authority to enable rail carriers to obtain access to terminal facilities owned by other carriers. This again is an authority the Board has almost entirely refrained from using, but under the wording of the statute could be used on the basis of virtually any type of public interest justification. Given that the statute provides no limitation on the plain language meaning of a terminal as a facility where passengers or goods are loaded or unloaded, and permits use of mainline trackage outside the terminal facility, the Board should not introduce unreasonable limitations on the application of this option.

While I don't believe this example involved any applications for terminal facilities access, a portion of the ICC's handling of the creation of the Powder River Basin Joint Line forms a meritorious template for the prospective provision of terminal access. When construction of the Joint Line was approved, only BN possessed the financial wherewithal to proceed, and it did so. Even though BN alone was constructing the line, CNW was allowed to gain equal access

to use it, provided CNW paid a proportional share of the cost. This approach by the ICC avoided the waste of resources that would have been associated with a separate CNW access. It provided a self-limiting opportunity for competition to enter the market (in the sense that CNW would only pay its share to get in if it reasonably expected to earn a return on the portion of the traffic it could serve), but also provided substantial up-front compensation/reimbursement for BN before any competitive movements could occur. This “model” could be applied more generally to enable new competitors to enter established markets.

D. 49 U.S.C. § 11102(c) (Reciprocal Switching Agreements)

As with through routes and access to terminal facilities, Congress gave the Board broad powers to provide carriers with access to traffic served by other carriers via reciprocal switching. Once again, this is an authority that the Board has refrained from using, but that under the wording of the statute could be used on the basis of virtually any type of public interest justification.

In response to specific questions posed by the Board, the plain language of the statute:

- indicates that the “practicable and in the public interest” standard should not be constrained by the provision permitting relief “where . . . necessary to provide competitive rail service.”; and,
- imposes no distance limitations on this provision.

While reciprocal switching potentially could be effective for smaller shipments, the record in Docket No. 42006, Omaha Public Power District v. Union Pacific Railroad Company indicates that it also is being or could be used to provide unit coal train service to powerplants.

3. Bottleneck Rates

Figure 3-7 on page 3-36 of the Christensen Study indicates that around the time the bottleneck cases were decided, the effect of adding length of haul shifted from being a measurable benefit (i.e., negative impact on cost) to a measurable, cost-increasing burden. This substantiates information I developed in a study of the public interest impacts of the Bottleneck Rule I performed for CURE, which was cited favorably in the joint study of rail issues prepared by the Departments of Agriculture and Transportation. With CURE's consent, much of the content of this analysis was also incorporated in Appendix A of my statement accompanying AECC's comments in Ex Parte No. 680,¹⁵ which I incorporate here by reference.

This analysis investigated the effects of the Bottleneck Rule on operating efficiency, rail system reliability, and rail infrastructure investments and requirements. It found that carriers have used the Bottleneck Rule to insulate themselves from competition through intermediate participation by other carriers, even where such participation would improve efficiency. Above and beyond its inflation of the prices paid by captive shippers, this has contributed to unnecessary operating costs, inefficient fuel use, costly system reliability problems, inefficient capital investments and blockage of potentially significant funding sources for future capacity and productivity improvements. My analysis concluded that the public interest would be served by unleashing the market forces that have been confined by the Bottleneck Rule.

¹⁵ STB Ex Parte No. 680, Study of Competition in the Freight Railroad Industry, "Comments of Arkansas Electric Cooperative Corporation Regarding Study of Competition in the U.S. Freight Railroad Industry Conducted by Christensen Associates" (December 22, 2008).

4. Access Pricing

The pricing of competitive access options obviously can play a critical role in determining the viability of their application. A price that is “too high” defeats the purpose of the access; one that is “too low” may undermine both equity and efficiency. At the same time, the circumstances under which competitive access may be implemented vary so much that it may be impossible in advance to specify hard-and-fast pricing rules.

In light of these circumstances, the following considerations should enter pricing decisions:

- The focus of access pricing should be on the costs of the facilities used, and associated operations, and not on the value to the incumbent associated with the contribution provided by the subject traffic. Competitive access will not be “competitive”, and its deterrent effect on conduct contrary to the public interest will be ineffective, if the access is on terms that essentially preserve the situation of the original monopolist;
- Any fees imposed should withstand scrutiny under applicable rate reasonableness criteria;
- Alternative pricing structures for the same access option may be needed to accommodate its application in different circumstances; and,
- The Board should be open to pricing structures that involve lump-sum payments to establish access and marketing parity.

In light of the findings discussed above regarding industry revenue sufficiency, the Board generally should not expect issues related to a carrier’s “current financial standing and future prospects” to be a variable in the determination of access pricing.

5. The Impacts of Improved Intramodal Competition on Railroads and Rail Customers

Enhancing railroad competition enables reliance on market forces, rather than regulation, to limit the exercise of market power. To the extent that competition brings rates into closer conformity with costs, it mitigates the deadweight economic losses associated with the exercise

of market power, spurs efficient production, and prevents a carrier from relying on its market power to protect against the consequences of poor service. These benefits flow through the economy in many forms, including reduced resource costs for carriers and shippers alike.

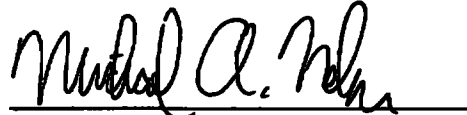
Railroads have relied on the proposition that competition somehow hinders investment. However, this has no theoretical or empirical foundation, and is refuted by any number of highly visible examples. For example, the major railroads have invested billions of dollars in facilities associated with intermodal services and the PRB Joint Line, both of which involve large volumes of prospectively competitive traffic. If anything, competition promotes both the quantity and quality of investments, particularly those that improve productivity and reduce resource costs.

Indeed, over the past 3 decades the reliance on market forces unleashed by the Staggers Act has spawned massive investments, not only by carriers but also by shippers and others who have benefitted from low-cost competitive rail service. If anything, as discussed in further detail in my analysis of the Bottleneck Rule, policies that restrict competition can have the effect of impeding, distorting or discouraging investment.

The carriers' argument that the Board should protect their revenue streams ultimately seeks to have the Board protect the competitors, and not the process of competition. This would be contrary to the public interest and the national transportation policy.

VERIFICATION

I, Michael A. Nelson, declare under penalty of perjury that the foregoing is true and correct. Further, I certify that I am qualified and authorized to file this verified statement.


Michael A. Nelson

Executed on April 9, 2011

MICHAEL A. NELSON

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EDUCATION

M.S. Civil Engineering, Massachusetts Institute of Technology

M.S. Management, Alfred P. Sloan School of Management, Massachusetts Institute of Technology

B.S. Management, Massachusetts Institute of Technology

Concentrations in transportation systems analysis, economics, operations research and public sector management.

EXPERIENCE

Mr. Nelson is an independent transportation systems analyst. He provides management and economic consulting and litigation support. His work typically involves developing and applying methodologies based on operations research, microeconomics, statistics and/or econometrics to solve specialized analytical problems, as illustrated by the following examples of his experience:

A. Railroad

On behalf of Arkansas Electric Cooperative Corporation (AECC), Mr. Nelson submitted extensive testimony to the Surface Transportation Board (STB) in Docket No. 42104/Finance Docket No. 32187. This testimony analyzed and commented on many aspects of alternative rail routes for transporting coal from the Powder River Basin (PRB) to the Independence Steam Electric Station (ISES) at Newark, AR.

Also on behalf of AECC, Mr. Nelson submitted testimony to the STB in Finance Docket No. 35305. This testimony analyzed extensive evidence regarding the deposition and effects of fugitive coal dust from movement of PRB unit coal trains.

Also on behalf of AECC, Mr. Nelson submitted testimony to the STB in Finance Docket No. 35081. This testimony addressed the effects of the proposed control by Canadian Pacific Railway (CP) of Dakota, Minnesota & Eastern Railroad (DME), with a particular focus on the planned DME construction project and other potential initiatives to create a new rail outlet for coal from the Powder River Basin (PRB).

On behalf of a group of landowners, Mr. Nelson developed information and provided oral testimony regarding DME's PRB project in land condemnation proceedings initiated by DME in Wyoming.

Also on behalf of AECC, Mr. Nelson submitted testimony to the STB in Ex Parte No. 657 (Sub-No. 1) regarding specific proposals to improve the "stand alone" cost (SAC) methodology used to assess the reasonableness of contested rail rates.

Also for AECC, Mr. Nelson analyzed issues related to rail transportation service in the supply of coal to two potential sites for a new electric generation facility in Arkansas. This work included analysis of likely rate levels in light of movement- and site-specific competitive and operational considerations.

Also on behalf of AECC, Mr. Nelson submitted testimony to the STB in Ex Parte No. 658. This testimony provided comments on rail regulation under the Staggers Act, and identified potential changes in rail regulation that would be consistent with the public interest and expected future industry conditions.

On behalf of a group of coal users, including Ameren, Dominion and AECC, Mr. Nelson submitted a verified statement to the STB in Finance Docket No. 34421. This testimony addressed technical, operational and public interest considerations associated with a proposal to permit the construction of a competing rail line within the unused portion of an existing rail carrier's right-of-way.

Mr. Nelson has developed information to assist coal users in responding to the coal supply problems created by the May 2005 derailments and subsequent rail throughput constraints on the PRB Joint Line. He has identified potential actions by coal users to improve PRB coal

throughput, transportation issues for substitute coals and fuels, and steps to facilitate rail cooperation.

In response to a public request by the STB for suggested improvements in the SAC methodology, Mr. Nelson provided written and oral testimony in STB Ex Parte No. 657. This testimony identified potential methodological refinements in 10 specific areas, and was cited by Commissioner Mulvey for its high responsiveness to the Board's request.

Mr. Nelson is the founder of the Coalition to Foster Improved Rail Economy ("CoalFIRE"). This initiative is open on a subscription basis to current and prospective PRB coal users. It identifies and promotes awareness of specific potential group actions to improve the competitiveness of PRB rail transportation options within the current legal and regulatory framework. Over 20 specific potential group actions have been identified to date, including steps to add/restore competitors, increase the effectiveness of existing competitors, increase customer leverage and develop external pressure for reasonable competitive conduct by the current PRB rail duopoly.

For a powerplant developer, Mr. Nelson analyzed issues related to rail transportation service in the supply of coal to two potential sites for a new generation facility in Oklahoma. This work included analysis of likely rate levels in light of movement- and site-specific competitive and operational considerations.

Mr. Nelson prepared a 10-year forecast of expected changes in rail productivity and competitive rail rate levels for the movement of coal from the PRB. This forecast has been provided on a subscription basis to interested parties, and is believed to be the only such forecast that is based on analysis of specific anticipated productivity enhancements (as opposed to extrapolation of past trends). Subscribers have used this information to analyze the merits of converting to PRB coal, to support contract negotiations and for other strategic and planning purposes.

For a powerplant developer, Mr. Nelson analyzed issues related to the anticipated reliance on competitive rail transportation service in the supply of coal to a planned new generation facility in Missouri. This work included analysis of likely rate levels in light of unique limitations faced by one of the competing rail lines.

On behalf of a group of over two dozen major electric utilities, Mr. Nelson provided strategic guidance and analytical support, and participated in negotiations with a Class I railroad regarding prospective multi-billion dollar investments by the utilities to improve their coal transportation options.

For a midwestern utility, Mr. Nelson assisted in the development of improved transportation options for a large coal-fired generating station. As part of this work, he reviewed an analysis performed by a major engineering contractor, and identified a series of cost-effective options that had been overlooked. He then provided strategic guidance and analytical support in the development process.

For a mining company, Mr. Nelson analyzed the transportation options that would be available for a prospective new facility in western Colorado. This included detailed consideration of the "new facilities" condition imposed by the STB in its approval of the merger of the Union Pacific (UP) and Southern Pacific (SP) railroads.

For AECC, Mr. Nelson submitted statements to the STB in Finance Docket Nos. 34177 and 34178. These statements addressed the actual and potential competitive roles of I&M Rail Link (IMRL) in domestic coal transportation, and the prospective impacts associated with control of IMRL by the Dakota, Minnesota and Eastern Railroad (DME).

On behalf of the Town of Easton (MA), representing a coalition of towns, Mr. Nelson identified and corrected a series of substantial errors and inconsistencies in the Final Environmental Impact Report for the proposal by the Massachusetts Bay Transportation Authority (MBTA) to provide new commuter rail service to New Bedford and Fall River. This extended Mr. Nelson's previous analyses, which had identified and documented a series of significant errors in the development of the MBTA's conclusions regarding the alleged infeasibility of a key alternative route. Mr. Nelson also identified and made preliminary assessments of other alignment and operational possibilities that had been inappropriately omitted from consideration.

As a subcontractor to The Brattle Group, an economic consulting firm, Mr. Nelson provided guidance to the Mexican railroad TFM regarding the identification of different types of competitive and efficiency issues raised by the proposed merger of the other two principal Mexican railroads (Ferromex and Ferrosur). The merger was denied by both the national transportation and antitrust authorities.

For the Cowboy Railroad Development Company (CRDC), a group of major electric utilities, Mr. Nelson directed the identification and evaluation of alternative routes and strategies for creating a new railroad access across Nebraska to coal mines in the PRB.

As part of the work for CRDC, Mr. Nelson analyzed the degree to which the UP/SP merger foreclosed competitive routes that could be offered by a new PRB rail carrier. The results of this analysis were submitted to the STB in Finance Docket 32760 (Sub-No.21), which provided oversight of the UP/SP merger and its impacts.

For a major electric utility, Mr. Nelson performed a detailed analysis of rail transportation options for PRB coal movements to the Sunflower Electric generating station at Holcomb, KS. The results of this analysis were used by the utility in assessing the merits of investing in a planned expansion of that facility.

For an assortment of major electric utilities and power producers, Mr. Nelson has performed detailed analyses of rail transportation options, including build-outs, for a total of over 30 large coal-fired generating stations. The results of these analyses have served as the basis for management decisions that are projected to save many millions of dollars in fuel costs.

On behalf of AECC, Mr. Nelson submitted a statement to the STB in Finance Docket 32760 (Sub-No.21). This statement addressed competitive issues resulting from the UP/SP railroad merger, with a particular focus on the effect of trackage rights compensation levels.

On behalf of the Committee to Improve American Coal Transportation (IMPACT), Mr. Nelson submitted a statement to the STB in Ex Parte 582 (Sub-No. 1). This statement addressed a wide range of issues related to rail merger policy.

For a major Class 1 railroad, Mr. Nelson assisted senior management staff in the design and evaluation of a potential construction project.

For the Mid-States Coalition for Progress (a group of landowners), Mr. Nelson analyzed the proposal by DME to construct an extension of its line into the PRB. Mr. Nelson developed estimates of DME's volumes and unit revenue levels on the basis of a plant-by-plant analysis, taking into account likely future market conditions and the competitive capabilities of the UP and Burlington Northern Santa Fe (BNSF). Mr. Nelson's analysis was filed at the STB (Finance Docket No. 33407).

For the National Railroad Passenger Corporation (AMTRAK), Mr. Nelson investigated issues related to the definition of "express" traffic that AMTRAK is permitted to carry (STB Finance Docket No. 33469). Mr. Nelson analyzed relevant data from the STB Rail Waybill Sample and the Census of Transportation, and investigated the factors affecting use of Amtrak by the U.S. Postal Service. The definition of "express" eventually adopted by the STB was consistent with Mr. Nelson's findings.

For the Moffat Tunnel Commission (Colorado), Mr. Nelson analyzed the factors affecting future railroad use of that tunnel, which traverses the Continental Divide and serves the principal Colorado coal fields on the UP line that formerly was the Denver and Rio Grande Western Railroad (DRGW) main line west of Denver. The tunnel had historically been owned by the Commission (and leased to the railroad), but under sunset legislation was being offered for public sale. Mr. Nelson's analysis included study of the utilization of Colorado/Utah vs. PRB coals in the context of the central corridor conditions imposed by the STB in the UP/SP merger.

For CP, Mr. Nelson performed detailed studies of competitive and traffic issues associated with the acquisition and break-up of Conrail by Norfolk Southern and CSX (Finance Docket No. 33388). These studies included analyses of competitive issues in the area served by the former Delaware and Hudson (a CP subsidiary) and in the midwest, competitive issues involving coal traffic throughout the Conrail service area, and traffic impacts associated with potential remedial conditions. CP relied

upon the results of Mr. Nelson's studies in reaching its settlements with Applicants in that case.

For SP, Mr. Nelson provided expert testimony before the Interstate Commerce Commission (ICC) in Finance Docket No. 32133 (the proposed control of C&NW by UP). This testimony was based primarily on Mr. Nelson's analyses of data from the Rail Waybill Sample, which identified substantial numbers of specific flows for which the proposed transaction created different types of potential competitive problems (including losses of point-to-point competition, source competition, competition in grain originations, and shipper leverage). In addition, Mr. Nelson's testimony utilized Rail Waybill Sample data to demonstrate the occurrence of merger-related foreclosure from previous UP acquisitions, and provided statistical support for SP's traffic study. Mr. Nelson also conducted a detailed investigation of the impact of the merger on source competition for western coal.

For Rio Grande Industries (RGI), Mr. Nelson provided expert testimony before the ICC in Finance Docket No.'s 31505 (the proposed acquisition by RGI of Soo's Kansas City - Chicago line) and 31522 (the proposed acquisition by RGI of the Chicago, Missouri and Western line between St. Louis and Chicago) based on his analysis of Rail Waybill Sample data. This testimony involved analysis of potential cumulative anti-competitive effects from the proposed transactions, development of time-series estimates of rail traffic volumes and carrier shares in different flows, and assessment of the statistical reliability of the portions of the testimony of other RGI witnesses that were based on Rail Waybill Sample data.

Also for RGI, Mr. Nelson provided expert testimony before the ICC in Finance Docket No. 32000, the consolidation of SP and DRGW. This testimony involved analysis of Rail Waybill Sample data to determine rail traffic volumes in different flows, the statistical reliability of studies conducted by other RGI witnesses, and potential competitive problem flows associated with a consolidation of SP and KCS.

For DRGW, Mr. Nelson provided expert testimony before the ICC in Finance Docket No. 30800 (the acquisition of MKT by UP) based on his analysis of Rail Waybill Sample data. This testimony involved examination of intramodal competition in

the central corridor, development of traffic flow databases utilized by other witnesses, assessment of the statistical reliability of other witnesses' studies, and analysis of issues related to use of market share data from waybill samples to evaluate the competitive impact of the proposed merger.

Also for DRGW, Mr. Nelson provided extensive expert testimony before the ICC regarding a number of issues raised by the proposed merger of SP with ATSF (Finance Docket No. 30400):

* Mr. Nelson provided a detailed comparison of the economic and operating characteristics of the intercity trucking and railroad industries, with a particular focus on long-haul markets. Mr. Nelson's analysis of the trucking industry utilized the National Motor Transport Data Base (NMTDB). For this study, Mr. Nelson developed and implemented analytical techniques that compensate for the non-random sampling procedures employed in the gathering of the NMTDB, making it possible to use this source to reliably conduct studies at the industry and corridor level. The Commission adopted the results of Mr. Nelson's study verbatim in its analysis of the anti-competitive consequences of the proposed merger.

* Using the NMTDB and the Rail Waybill Sample, Mr. Nelson analyzed the extent to which rail pricing and services on selected traffic are determined by competing intercity trucking alternatives available to shippers. This analysis was conducted at a highly detailed level, and included explicit accounting for the handling characteristics of each rail commodity and the operating economics of the corresponding truck equipment needed.

* Mr. Nelson analyzed the tests applied by various economists in the proceedings, including those of the U.S. Departments of Justice and Transportation, to identify rail traffic that would most likely be subject to anti-competitive effects in the wake of the proposed merger. Mr. Nelson identified circumstances under which these tests systematically yield invalid results, and provided guidelines for their proper application.

* Mr. Nelson identified improvements needed in the merger applicants' initial methodology for estimating the

rail traffic diversions that likely would result from the proposed merger.

* In addition to this expert testimony, Mr. Nelson served as principal investigator for several studies underlying testimony offered by other witnesses, addressing issues related to intramodal (rail) competition, product and source competition, shipper benefits and leverage and trackage rights compensation. Mr. Nelson also conducted a number of special studies on request for other witnesses and counsel.

For a private client, Mr. Nelson participated in a study of the purchase and utilization of jumbo covered hopper cars by shippers and railroads. This study involved extensive analysis of the Rail Waybill Sample and other data sources, and included a detailed examination of historical car shortages in light of economic and traffic conditions, and other related factors. The results of Mr. Nelson's work were incorporated in testimony before the ICC.

As a subcontractor to consulting firms, Mr. Nelson has participated in a number of other rail-related studies. These include (1) analysis of Rail Waybill Sample data to address issues stemming from traffic protective conditions at the Jacksonville (FL) gateway between FEC and CSX, and (2) analysis of CN's Port Huron-Sarnia tunnel project and the alternative of a tunnel at Detroit-Windsor.

B. Postal Service

For Magazine Publishers of America (MPA) acting on behalf of a coalition of periodicals mailers, Mr. Nelson analyzed several issues related to the purchased transportation costs incurred by the Postal Service. This included identification of feasible cost reductions and efficiency improvements, as well as development of needed refinements in the methods used by the Postal Service to analyze transportation costs. The results of this analysis were presented to the Postal Rate Commission (PRC) in the R2000-1 omnibus rate case. A portion of the identified costing refinements has been adopted by the Postal Service.

Mr. Nelson identified and developed opportunities for a major publisher to create more efficient and desirable price/service options by avoiding selected costs in its mailings of periodicals. This work included consideration

of transportation, delivery and unfunded retirement liability costs.

For Foster Associates (under contract to the Postal Service), Mr. Nelson worked in the following areas:

* Delivery costing - Mr. Nelson developed a series of refinements in delivery cost analysis procedures. These refinements included analysis of driving time on motorized letter routes, collection costing and extensive revision of costing for special purpose routes and special delivery messengers. In support of the new methodologies, Mr. Nelson developed data collection plans and assisted in the development of survey instruments and innovative procedures to gather new field data from carrier and messenger operations. He conducted extensive analysis of the new data, including development of data cleaning and weighting procedures, analysis program logic, and specifications for new econometric models. He also identified an overlap in costing systems that produced a "double-count" of delivery activity performed by personnel other than special delivery messengers but charged to LDC 24 (Cost Segment 9). He developed spreadsheet modifications needed to incorporate the costing refinements and new data, and eliminate the "double-count" problem. The results of Mr. Nelson's delivery costing work were presented before the PRC in the R97-1 omnibus rate case. The PRC adopted 9 out of 10 of Mr. Nelson's recommended methodological changes, 2 with commendations.

* New products - Mr. Nelson identified the cost basis for a number of potential new product offerings involving Express Mail and Priority Mail, and developed the analytical framework and information needed to support their implementation. This included design and analysis of a new field study of relevant Express Mail piece characteristics, which was also presented by Mr. Nelson in the R97-1 rate case.

* Litigation support - In Docket No. R94-1, Mr. Nelson reviewed intervenor testimony regarding city delivery carrier and transportation issues, and developed discovery and cross-examination topics for Postal Service counsel.

* IOCS - Mr. Nelson developed refinements in IOCS data gathering procedures to improve the validity and precision of available information regarding Express Mail activities.

Mr. Nelson then interpreted the initial results from the new data and provided suggestions for improvements in Express Mail costing procedures.

* Postal AMR - Mr. Nelson developed a plan for analyzing the street time costs associated with a proposal to have postal vehicles perform automated meter reading for utility companies.

* Eagle Network - Mr. Nelson developed a potential methodology for attributing the costs of dedicated air transportation services procured by the Postal Service.

For United Parcel Service (UPS), Mr. Nelson provided extensive expert testimony before the PRC in Docket No. R90-1. This testimony presented Mr. Nelson's studies of cost causality and/or elasticity within the city delivery carrier, special delivery messenger, vehicle service driver, purchased highway transportation and expedited air network operations of the Postal Service. These studies, which involved application of operations research techniques and development of econometric models and other statistical analyses based on postal data, were referenced and relied upon extensively by the PRC in its Opinion and Recommended Decision. To a considerable degree, these studies represented extensions and refinements of Mr. Nelson's previous studies, which were presented before the PRC in Mr. Nelson's testimony in Docket No. R87-1, and in Docket No. RM86-2B, a rulemaking proceeding established in part to explore issues raised in testimony before the PRC in Docket No. R84-1 for which Mr. Nelson served as principal investigator.

C. Other

Mr. Nelson participated in an airport master planning study for Sydney, Australia. For this study, he developed a comprehensive set of site selection criteria and evaluation measures.

Until February 1984, Mr. Nelson was a Senior Research Associate at Charles River Associates (CRA), an economic research and consulting firm, where his work experience included the following:

Freight Transportation

Mr. Nelson served as Manager of Consulting Services for the National Motor Transport Data Base (described above), which at the time was sponsored by CRA. In this position, he was responsible for handling client requests for information from the database, including problem definition, sampling issues, conduct of analyses and reporting of results. He conducted specific analyses for a number of public and private clients.

Mr. Nelson served as principal investigator for a study of motor carrier safety and traffic characteristics. This study involved extensive analysis of a number of databases, including the FHWA "Loadometer" Study, the 1977 Census of Transportation, the ICC "Empty/Loaded" Survey, and the NMTDB. The results of his work were incorporated in testimony before the U.S. District Court on behalf of a private client engaged in litigation with a state over the use of twin trailers.

Mr. Nelson participated in several other projects providing support for motor carriers involved in litigation cases. For these clients he performed detailed financial analyses of motor carrier operations and traffic in different settings, and assisted in the preparation of testimony and briefs. Mr. Nelson also served as an internal consultant on a number of CRA's other motor carrier, railroad, and freight transportation studies.

For the U.S. Department of Transportation (DOT), Mr. Nelson was principal investigator of a study to develop a conceptual framework and data collection strategy for analyzing the impacts of the motor carrier regulatory reforms implemented under the Motor Carrier Act of 1980. For this project, Mr. Nelson was responsible for identifying and selecting specific research issues, data requirements, data sources and analytical techniques.

In a study for the Office of the Secretary of Transportation, Mr. Nelson made extensive use of probabilistic modeling techniques to develop quantitative

estimates of potential fuel conservation resulting from selected aspects of proposed motor carrier regulatory reforms.

For DOT, Mr. Nelson was principal investigator for a study of the merits of alternative approaches that could be utilized by the ICC to implement the inflation-based index for allowable rate adjustments by railroads mandated by the Staggers Rail Act of 1980. For this study he analyzed the ICC's proposed approach and developed specific conclusions and recommendation in a number of issue areas, including selection of the basic index, productivity adjustments, treatment of profit and non-recurring expenses, frequency of index adjustment, rate averaging, regional differences, collective ratemaking and fuel surcharges. The results of this study were used by DOT in formulating its response to the ICC's proposed approach.

For a private client, Mr. Nelson analyzed the logistical considerations involved in siting a plant to process imported high-value mineral ores. This study, which was part of a larger study to assess the overall economic feasibility of plant construction and operation, involved comparisons of costs and other attributes of a variety of modes and modal combinations, including rail, inland waterway, motor carrier and TOFC.

In a study of urban freight consolidation alternatives conducted for the U.S. Department of Energy (DOE), Mr. Nelson utilized principles of network analysis, simulation and queuing theory to evaluate and critique the merits of previous studies, and recommend research approaches for analysis of route and terminal consolidation strategies.

Also for DOE, Mr. Nelson was a major contributor to a study of potential fuel-use changes that could occur in response to dramatic fuel price increases. Mr. Nelson's work focused on the freight and intercity passenger transportation sectors and included analyses of opportunities for improvements in fuel efficiency by each mode under different fuel price increase scenarios, as well as modal shifts and net traffic reductions caused by resulting cost (and rate) increases.

Passenger Transportation

Mr. Nelson served as principal investigator for a series of Service and Management Demonstration Evaluations conducted for DOT. For three parallel assessments of the feasibility of user-side subsidies, and one demonstration of taxicab regulatory reforms and paratransit service innovations, he developed instruments for and implemented several surveys, conducted data analysis and prepared Final Evaluation Reports. For an assessment of alternative transit transfer policies, he developed research issues and data requirements, selected and supervised interviews of over 40 transit properties, and wrote or was responsible for all major deliverables. He assisted DOT in the development of research issues to be addressed in demonstrations of innovative checkpoint paratransit services and in the review of a proposed paratransit policy.

Also for DOT, Mr. Nelson was principal investigator of a study of methods to improve transit productivity and cost-effectiveness. This study involved the identification and documentation of 146 distinct productivity-enhancement measures that have been implemented at U.S. transit properties, assessment of the transferability of each measure to different settings, and development of impact magnitude estimates. Prior to this project, Mr. Nelson developed over two dozen ideas for possible innovations to improve transit productivity and cost effectiveness.

Mr. Nelson participated in a financing study of the New York Metropolitan Transportation Authority's proposed multi-billion dollar capital improvement program. Mr. Nelson's responsibilities in this project involved econometric analysis of operating costs, with a particular emphasis on identifying the variability of different cost components with alternative future levels of rapid rail, bus, and commuter rail activity. The results of his work were incorporated in the MTA's Official Statement for the successful initial offering of \$250 million in transit revenue bonds.

For DOT, Mr. Nelson participated in a study to develop technical guidelines for use by local planners to satisfy alternatives analysis requirements. For this study he developed a matrix-based method for determining data requirements in different scenarios, and played a major

role in the development of a method for generating locally responsive alternatives to high-capital transit investments using multicriteria decision techniques.

For the Massachusetts Port Authority, Mr. Nelson participated in a study to forecast future levels of passenger and air cargo activity at Logan International Airport. For this study, Mr. Nelson supervised data collection efforts, developed methods for synthesizing data from diverse sources (FAA, CAB, Port Authority records, etc.) to yield relevant market segment size estimates, and analyzed seasonality and short-term peaking phenomena.

Mr. Nelson also participated in a quantitative assessment of the market penetration potential and associated impacts of electric vehicles for the Electric Power Research Institute (EPRI).

Thesis

In his graduate thesis at M.I.T., which fulfilled the thesis requirements for two Master's degrees, Mr. Nelson developed a comprehensive review of the theoretical and practical shortcomings encountered in the use of linear programming in a real time multiple vehicle routing and scheduling system (dial-a-ride). Based on network analysis techniques, he then developed a set of heuristic algorithms that avoided the shortcomings inherent in the linear programming (LP) approach. The performance of these algorithms was simulated by computer and found to meet or exceed the LP's performance in a variety of scenarios drawn from actual operating data.

TESTIMONY

Surface Transportation Board, Docket No. 42104/Finance
Docket No. 32187

- Rebuttal Verified Statement, 9-2-08
- Verified Statement, 4-7-10
- Rebuttal Verified Statement, 7-9-10

Surface Transportation Board, Finance Docket No. 35305

- Verified Statement, 3-16-10
- Reply Verified Statement, 4-30-10
- Rebuttal Verified Statement, 6-4-10

U.S. District Court - District of Wyoming, Civil No. 07 CV-142-D

- Oral Testimony, 3-19-08
- Oral Testimony, 5-29-08

Surface Transportation Board, Finance Docket No. 35081

- Verified Statement, 3-4-08
- Reply Verified Statement, 5-19-08

Surface Transportation Board, Ex Parte No. 657 (Sub-No. 1)

- Written Testimony, 5-1-06
- Reply Testimony, 5-31-06

Surface Transportation Board, Ex Parte No. 658

- Written Testimony, 10-12-05
- Oral Testimony, 10-19-05

Surface Transportation Board, Finance Docket No. 34421

- Verified Statement, 9-29-05

Surface Transportation Board, Ex Parte No. 657

- Written Testimony, 4-20-05
- Oral Testimony, 4-26-05

Surface Transportation Board, Finance Docket No. 34178

- Verified Statement, 11-14-02

Surface Transportation Board, Finance Docket No. 34177

- Verified Statement, 7-18-02

Surface Transportation Board, Finance Docket No. 32760
(Sub-No. 21)

- Verified Statement, 8-17-01
- Verified Statement, 8-18-00

Postal Rate Commission, Docket No. R2000-1

- Direct Testimony, MPA-T-3, 5-22-00

Surface Transportation Board, Ex Parte No. 582 (Sub-No. 1)

- Statement, 5-16-00

Surface Transportation Board, Finance Docket No. 33407

- Verified Statement, 8-31-98
- Supplemental Verified Statement, 10-28-98

Surface Transportation Board, Finance Docket No. 33469

- Verified Statement, 11-10-97
- Reply Verified Statement, 11-25-97

Postal Rate Commission, Docket No. R97-1

- Direct Testimony, USPS-T-19, 7-10-97

Interstate Commerce Commission, Finance Docket No. 32133

- Verified Statement, SP-20 (Volume 2), 11-29-93
- Rebuttal Verified Statement, SP-41 (Volume 2), 7-28-94

Postal Rate Commission, Docket No. R90-1

- Direct Testimony, UPS-T-1, 7-16-90
- Rebuttal Testimony, UPS-RT-1, 10-1-90

Interstate Commerce Commission, Finance Docket No. 31505

- Verified Statement, RGI-14/SOO-14 (Volume 2), 9-15-89
- Rebuttal Verified Statement, RGI-55/SOO-55, 2-15-90

Interstate Commerce Commission, Finance Docket No. 31522

- Verified Statement, RGI-7/CMW-7 (Volume 2), 8-25-89

Interstate Commerce Commission, Finance Docket No. 32000

- Verified Statement, RGII-10, 2-22-88
- Verified Opposition and Rebuttal Statement, RGII-59, 6-1-88

Postal Rate Commission, Docket No. R87-1

- Direct Testimony Concerning Special Delivery Messenger and City Delivery Carrier Street Time Costs, UPS-T-1, 9-14-87
- Rebuttal Testimony, UPS-RT-5, 11-23-87
- Statement Regarding SDWAFS Analyses, 12-1-87

Interstate Commerce Commission, Finance Docket No. 30800

- Verified Statement, DRGW-13, 4-7-87
- Verified Statement, DRGW-24, 7-13-87

Postal Rate Commission, Docket No. RM86-2B

- Direct Testimony Concerning City Delivery Carrier Street Time Costs, UPS-T-1, 12-1-86

Interstate Commerce Commission, Finance Docket No. 30400

- Verified Opposition Statement, DRGW-20, 11-21-84
- Verified Opposition Statement, DRGW-23, 12-10-84 (with Paul H. Banner)
- Verified Rebuttal Statement, DRGW-33, 5-29-85

PUBLICATIONS

Reports Prepared for Charles River Associates

User-Side Subsidy Demonstration Project: Lawrence, Massachusetts. Final Evaluation Report. Prepared for U.S. Department of Transportation. October, 1983.

Analysis of Labor Conditions and Union Status in the Intercity Trucking Industry. Final Report. Prepared for U.S. Department of Transportation. August, 1983.

Actions Being Taken by Transit Operators to Improve Performance. Final Report. Prepared for U.S. Department of Transportation. April, 1983.

User-Side Subsidy Demonstration Project: Montgomery, Alabama. Final Evaluation Report. Prepared for U.S. Department of Transportation. December, 1982.

Plan for Monitoring the Impacts of Regulatory Reforms Implemented Under the Motor Carrier Act of 1980. Final Report. Prepared for U.S. Department of Transportation. October, 1982.

New York City Transit Authority Revenue Feasibility Study: Economic Analyses and Projections. Final Report. Prepared for Metropolitan Transportation Authority, New York, NY. In part. October, 1982.

Taxi Regulatory Revisions in Dade County, Florida. Data Collection Plan. Prepared for U.S. Department of Transportation. April, 1981.

Analysis of Rail Cost-Plus Pricing Systems. Prepared for U.S. Department of Transportation. March, 1981.

Net Demand for Oil Imports: Preliminary Estimates of Short-Run Price Elasticities. Prepared for the U.S. Department of Energy. In part. December, 1980.

User-Side Subsidy Demonstration Project: Kinston, North Carolina. Final Evaluation Report. Prepared for U.S. Department of Transportation. October, 1980. Executive Summary reprinted in Taxicab Management November/December, 1981.

Potential Fuel Conservation from Regulatory Reform of the Trucking Industry. Prepared for Office of the Secretary of Transportation. July, 1980.

Operator Guidelines for Transfer Policy Design. Prepared for U.S. Department of Transportation. June, 1980.

State of the Art of Current Practices for Transit Transfers. Prepared for U.S. Department of Transportation. June, 1980.

"Generation of Transportation Alternatives." Technical Monograph prepared for U.S. Department of Transportation. January, 1979.

"Definition of Transportation Alternatives." Technical Monograph prepared for U.S. Department of Transportation. November, 1978.

Preliminary Analysis of Alternative Proposals to Encourage Efficient Service Concepts in Urban Freight Movement. Prepared for U.S. Department of Energy. In part. October, 1978.

Other Publications

Nelson, Michael and Daniel Brand. 1982. "Methods for Identifying Transportation Alternatives." Transportation Research Record 867.

Nelson, Michael, Daniel Brand and Michael Mandel. 1982. "State of the Art Current Bus Transfer Practices." Transportation Research Record 854.

Nelson, Michael and Jane Piro. March, 1982. "Implementation and Impacts of the Kinston, North Carolina User-Side

Subsidy Demonstration Project." Specialized Transportation Planning and Practice.

Nelson, Michael and Paul H. Banner. 1981. "Analysis of Alternative Railroad Cost Recovery Procedures." Proceedings - Twenty-Second Annual Meeting of the Transportation Research Forum.

Nelson, Michael, Daniel Brand and Michael Mandel. 1981. "Use and Consequences of Timed Transfers on U.S. Transit Properties." Transportation Research Record 798.

Mellman, Robert, Michael Nelson and Jane Piro. 1980. "Forecasts of Passenger and Air Cargo Activity at Logan International Airport." Transportation Research Record 768.

Nelson, Michael. 1978. "Evaluation of Potential Replacements for Failing Conventional Transit Services." M.S. Thesis, Massachusetts Institute of Technology, Department of Civil Engineering and Alfred P. Sloan School of Management.